(a) contacting the agent with the three-dimensional, engineered, bioprinted, biological intestinal tissue model of any one of claims **1-28**; and

(b) measuring the kinetics of absorption by the intestinal tissue model.

74. A method of predicting the effective dosing concentration and dosing schedule of a candidate therapeutic agent, the method comprising:

(a) contacting varying concentrations or amounts of the agent with the three-dimensional, engineered, bioprinted, biological intestinal tissue model of any one of claims **1-28**; and

(b) measuring the effect of the agent on the viability or functionality of the intestinal tissue model cells over time; and

(c) measuring the recovery of the intestinal tissue model cells over time to determine the minimum timing between doses that provide efficacy.

75. The method of claim **74**, further comprising:

(d) removing the agent; and

(e) assessing whether the absence of the agent results in improved viability or functionality of the intestinal tissue model.

76. A method of making the intestinal tissue model any one of claims **1-28**, the method comprising:

(a) depositing a layer comprising intestinal myofibroblasts onto a biocompatible surface; and

(b) depositing a layer of intestinal epithelial cells onto the layer of intestinal myofibroblasts.

77. The method of claim **76**, wherein at least one of the intestinal myofibroblasts and intestinal epithelial cells are deposited by bioprinting.

78. The method of claim **76**, wherein at least one of the intestinal myofibroblasts and intestinal epithelial cells are deposited by ink-jet printing.

79. The method of claim **76**, wherein at least one of the intestinal myofibroblasts and intestinal epithelial cells are deposited by extrusion.

80. The method of claim **76**, wherein at least one of the intestinal myofibroblasts and intestinal epithelial cells are deposited by microvalve or microsolenoid valve printing (MSV).

81. The method of any one of claims **76-80**, wherein at least one of the intestinal myofibroblasts and intestinal epithelial cells are deposited as part of a bio-ink.

82. The method of claim **81**, wherein the bio-ink comprises a hydrogel.

83. The method of claim **82**, wherein the hydrogel is collagen.

84. The method of any one of claims **76-83**, further comprising depositing immune cells.

85. The method of claim **84**, wherein the immune cells are T cells, B cells, macrophages, dendritic cells, basophils, mast cells or eosinophils.

86. The method of claim **84** or **85**, wherein the immune cells are deposited as part of at least one of the intestinal tissue layers.

87. The method of any one of claims **84-86**, wherein the immune cells are deposited in at least one of (a) the interstitial layer, (b) the epithelial cell layer, (c) between the interstitial layer and the epithelial cell layer, (d) on top of the epithelial cell layer, and (e) below the interstitial cell layer.

88. The method of any one of claims **84-87**, wherein the immune cells are deposited as a layer or compartment within the intestinal tissue model.

89. The method of any one of claim **84-88**, wherein the intestinal tissue model is deposited into the wells of a microtiter plate.

90. The method of any one of claims **84-89**, further comprising culturing the intestinal tissue model in cell culture media.

91. The method of claim **90**, wherein the intestinal tissue model is cultured for at least 3 days in the cell culture media.

92. The method of any one of claims **84-91**, wherein the biocompatible surface is in the well of a microtiter plate.

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